

## Layer-3 Network Routing with RPR Layer-2 Visibility

**ABSTRACT OF THE DISCLOSURE**

Routing tables of OSI layer-3 network elements are modified  
5 in order to enable entry to a RPR subnet at different entry  
points. This enables virtual tunnels or routing paths to utilize  
all existing entry links to the RPR subnet and to minimize  
cost factors, such as the number of RPR spans required to traverse  
the RPR subnet from the entry point to a destination RPR  
10 node. The routing tables of RPR subnet elements are modified,  
such that traffic leaving different elements but destined for  
the same network location outside the RPR subnet may have individualized  
RPR exit nodes. The respective RPR exit points for  
the network elements are chosen to minimize cost factors, such  
15 as the number of RPR spans required to reach the exit node from  
each RPR node.